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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,661	08/11/2003	Shoji Imaizumi	44085-169	3540

7590 06/28/2005

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600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER
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CHEN, WENPENG

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/637,661

**Applicant(s)**

IMAZUMI ET AL.

**Examiner**

Wenpeng Chen

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-14 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-14, 26-27, 30-31 is/are rejected.
- 7) ☒ Claim(s) 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Examiner's responses to Applicant's remark**

1. Applicants' arguments and amendments filed on 4/6/2005 have been fully considered.

2. Applicants' arguments and amendments, the amendment of inventors, and submission of English translation of Japanese application that establishes the priority date to 7/3/1998 overcome the followings set forth in paper #20041018 mailed on 10/21/2004:

-- objections to specification (paragraphs 1 and 2);

-- rejection to Claims 11-14 and 26-31 under 35 U.S.C. 102(e) based on Imaizumi et al. (US patent 6,21,512) (paragraph 4);

-- rejection to Claims 11-14 and 26-31 under 35 U.S.C. 102(e) based on Imaizumi et al. (US patent 6,441,915) (paragraph 5);

-- rejection to Claims 11-14 and 26-31 are rejected under 35 U.S.C. 102(f); (paragraph 6)

-- rejection to Claim 31 under 35 U.S.C. 102(b) based on Kanai et al. (Japan patent 10148779). (paragraph 7)

3. Applicants' arguments with regard to rejection under 35 U.S.C. 102(b) based on Fukushima (US patent 6,115,561) are not persuasive. The Examiner has thoroughly reviewed Applicants' arguments but firmly believes that the cited reference to reasonably and properly meet the claimed limitation.

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Applicants' argument -- Applicants submit that Fukushima does not disclose detecting image distortion, but detecting image density. The  $\Delta D$  is not image distortion

Examiner's response -- Applicants are reminded that the Examiner is entitled to give the broadest reasonable interpretation to the language of the claims. The Examiner is not limited to Applicants' definition which is not specifically set forth in the claims. In re Tanaka et al., 193 USPQ 139, (CCPA) 1977.

Claim 11, 26, and 31 recite the feature at issue as "a sensor which detects a quantity of image distortion in the image formed by said printer". As explained in Fukushima, toner is used to print an image containing Y, M, C, and K. When an image is formed with the toners, the toner densities that are transferred to a paper to form an image are thus a quality of image in the image formed by the printer. Thus, a deviation of toner intensity is considered a quantity of image distortion in the image formed by a printer.

Unless the Applicants further specify the "quantity of image distortion" to distinguish it from the above interpretation, the Examiner considers the cited passages of Fukushima reasonably and properly meet the claimed limitation.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 11-14, 26-27, and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukushima (US patent 6,115,561 cited previously.)

Fukushima teaches an image forming apparatus comprising:

-- a printer which forms an image according to image data in the unit of each pixel;  
(column 10, lines 14-35)

-- a sensor which detects a quantity of image distortion in the image formed by said printer; (column 10, line 10 to column 11, line 20; The  $\Delta D$  is the distortion.)

-- a corrector which corrects the image by providing print data according to the quantity of image distortion detected by said sensor, wherein said corrector corrects the image distortion in a predetermined range; (column 11, lines 11-30; The correction is limited to a range for negative  $\Delta D$ . )

-- a controller which sets the quantity of image distortion to a maximum in a predetermined range when the quantity of image distortion detected by said sensor exceeds the predetermined range and makes said corrector correct the image according to the corrected quantity of image distortion; wherein the controller continues a print operation even though the image distortion detected by said sensor exceeds the predetermined range; (column 11, lines 11-30; The correction is set at zero for positive  $\Delta D$ . )

-- wherein said printer performs printing with a plurality of print colors and said sensor detects the quantity of image distortion of other colors than a reference color in the print colors relative to the image of the reference color; (column 10, line 14 to column 11, line 20)

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-- wherein said printer comprises a plurality of image-forming units in correspondence to the plurality of print colors, and said image-forming units are arranged serially; (Part B of Fig. 1; components 120, 130, 140, and 150)

-- wherein said corrector corrects the image distortion in a main scan direction and in a subscan direction; (As shown in Fig. 1, the image are printed in a main scan direction and in a subscan direction. Therefore, the correction is also performed in both directions.)

-- wherein the controller sets the image distortion to a maximum value in the predetermined range. (column 11, lines 11-30; The correction is set at zero for positive  $\Delta D$ .)

#### **Allowable Subject Matter**

6. Claims 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner's statement of reasons for the indication of the subject matter is given below. The prior art fails to teach the apparatus of Claim 28 that specifically comprises the following features in combination with other recited limitations:

-- a controller which *sets the quantity of image distortion to a maximum in a predetermined range when the quantity of image distortion detected by said sensor exceeds the predetermined range* and makes said corrector correct the image according to the corrected quantity of image distortion;

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-- wherein said printer performs printing with a plurality of print colors and *said sensor detects image distortion of other colors than a reference color in the print colors relative to the image of the reference color.*

### **Conclusion**

7. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). The Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 571-272-7431. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 571-272-7437. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular

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communications and 571-273-8300 for After Final communications. TC 2600's customer service number is 571-272-2600.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Wenpeng Chen  
Examiner  
Art Unit 2624

June 20, 2005

A handwritten signature in black ink, appearing to read 'Wenpeng Chen', with a long horizontal flourish extending to the right.